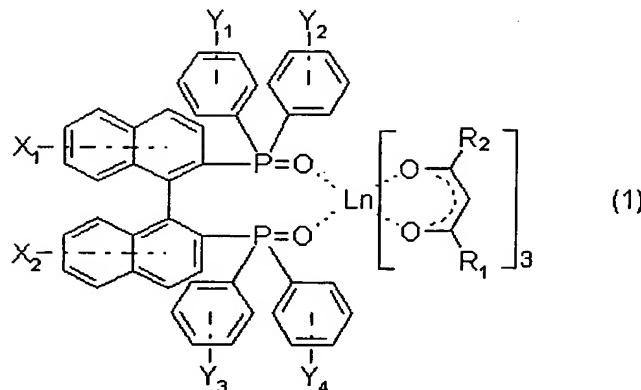


## CLAIMS

1. An optically active rare earth complex represented by a general formula (1):



(in the formula (1),  $X_1$  and  $X_2$  each independently represents a hydrogen atom, a halogen atom, an alkyl group having 1 to 4 carbon atoms or alkoxy group having 1 to 4 carbon atoms;  $Y_1$ ,  $Y_2$ ,  $Y_3$ , and  $Y_4$ , each independently represents a hydrogen atom, a halogen atom, or an alkyl group having 1 to 4 carbon atoms;  $R_1$  represents an alkyl group having 1 to 8 carbon atoms, a fluorine-substituted alkyl group having 1 to 8 carbon atoms, or a phenyl group; and  $R_2$  is a group selected from the group consisting of;

(a) a cyclopentadienyl group (one  $\text{CH}_2$  group existing in the cyclopentadienyl group may be replaced by  $-\text{O}-$  or  $-\text{S}-$ ),

(b) a phenyl group (one or two  $\text{CH}$  groups existing in the phenyl group may be replaced by  $\text{N}$ ), and

(c) a naphthyl group (one or two  $\text{CH}$  groups existing in the naphthyl group may be replaced by  $\text{N}$ ), and

the groups included in (a), (b), and (c) may be substituted with an alkyl group or a halogen atom; and  $\text{Ln}$  represents a rare earth metal atom).

2. The optically active rare earth complex according to claim 1, wherein  $X_1$  and  $X_2$  in the general formula (1) are hydrogen atoms.

3. The optically active rare earth complex according to claim 1, wherein Y<sub>1</sub>, Y<sub>2</sub>, Y<sub>3</sub>, and Y<sub>4</sub> in the general formula (1) are hydrogen atoms.
4. The optically active rare earth complex according to claim 1, wherein Ln in the general formula (1) is one of Eu and Yb.
5. The optically active rare earth complex according to claim 1, wherein R<sub>1</sub> in the general formula (1) is a trifluoromethyl group.
6. The optically active rare earth complex according to claim 1, wherein R<sub>2</sub> in the general formula (1) is a thienyl group.
7. The optically active rare earth complex according to claim 1, wherein an optical purity of the compound represented by the general formula (1) is 70%ee or more.
8. The optically active rare earth complex according to claim 1, wherein an optical purity of the compound represented by the general formula (1) is 90%ee or more.